



QRAE II

Multi-gas Diffusion or Pump Detector
for O₂, Combustibles, H₂S, or CO



The QRAE II is a full-featured, compact, one- to four-sensor gas detector for oxygen, combustibles, hydrogen sulfide, or carbon monoxide. Key features include easy-to-change battery pack, a water-resistant case and a new state-of-the-art O₂ sensor.

KEY FEATURES

- Patented SPE O₂™ Oxygen sensor features:
 - Lead-free design that complies with RoHS directive
 - Extended life resulting in low cost of ownership
 - Leak-free design, minimizing downtime
- Best EMI/RFI immunity technology, minimizing electromagnetic and radio interference
- Easy access to pump, sensors, filter and battery compartment
- IP-65 water- and dust-resistant case
- Strong, protective, concussion-proof design
- Plug-in sensors: oxygen, combustibles, hydrogen sulfide, or carbon monoxide
- Intuitive simple-to-operate two-button user interface
- Multi-language support
- One-button calibration with auto-zero capability

APPLICATIONS

Confined space entry and general safety and compliance in:

- Emergency response
- Environmental
- Fire service
- Industrial safety
- Oil and gas applications

- Pump or diffusion models available
- Cradle connects to PC and charges monitor and battery
- Large graphic display can be flipped 180° with a push of a button for convenient viewing from belt or hand
- Rechargeable Lithium-ion battery pack provides up to 14 hours of continuous operation
- Rugged housing



SPE O₂™ sensor designed to meet RoHS directive



QRAEII Pump being used for a confined space entry

QRAE II



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SPECIFICATIONS

Detector Specifications

Size	Diffusion: 5" L x 2.8" W x 1.5" H (12.5cm x 7.2cm x 3.8cm) Pump: 5" L x 2.8" W x 2" H (12.5cm x 7.2cm x 5.0cm)
Weight	Diffusion: 9 oz (250 g) Pump: 12 oz (350 g)
Sensors	<ul style="list-style-type: none"> Catalytic bead for combustibles Oxygen: SPE O₂™ (non-consumable Solid Polymer Electrolyte technology) Toxic: electrochemical for H₂S or CO
Battery	Interchangeable Lithium-ion or alkaline battery packs
Operating Period	Diffusion: Up to 14 hours continuous operation with Lithium-ion battery, up to 10 hours with alkaline battery (typical, without alarm) Pump: Up to 10 hours with Lithium-ion battery, up to 8 hours with alkaline battery
Display Graphic	4 lines, with LED automatic back light in dim light or alarm condition
Keypad	Two-button operation
Direct Readout	<ul style="list-style-type: none"> Instant reading from up to four sensors Oxygen as percentage by volume Combustible gas as percentage of lower explosive limit (LEL), scalable using correction factors Toxic gases in parts per million High and low values for all gases Battery and shutdown voltage Date, time, elapsed time, temperature
Alarms	<ul style="list-style-type: none"> 95dB buzzer (at 30 cm, typical), vibration alarm, and flashing red LED High: 3 beeps, vibration and flashes per second Low: 2 beeps, vibration and flashes per second STEL and TWA: 1 beep, vibration and flash per second Alarms: latching with manual override or automatic reset Additional diagnostic alarm and display message for low battery Pump stall alarm (QRAE II Pump only)
EMI/RFI	Highly resistant to EMI/RFI. Compliant with EMC directive 2004/108/EC additional +60 volts/meter
IP Rating	IP-65
Datalogging	Standard 12 days at one-minute intervals
Calibration	Two-point calibration for zero and span (manual, or automatic with the AutoRAE Lite)
Sampling Pump	Optional, internal pump 300 cc/min
Hazardous Area Approval	<ul style="list-style-type: none"> US and Canada: cULus Cl, D1, Groups A, B, C, D, T4 Europe: ATEX II 2G EEx ia d IIc T4 IECEx: Ex ia d II T4
Temperature	-4° to 113° F (-20° to 50° C) for T4 temperature code
Humidity	0% to 95% relative humidity (non-condensing)
Attachments	Stainless-steel alligator clip
Warranty	Full 2-year warranty, including all sensors

Specifications are subject to change

Default Sensor Specifications*

Gas Monitor	Range	Resolution
Oxygen	0 to 30.0%	0.1%
Combustible	0 to 100% LEL	1% LEL
Carbon Monoxide	0 to 1000 ppm	1 ppm
Hydrogen Sulfide	0 to 100 ppm	0.1 ppm

*Consult RAE Systems for custom configurations

QRAE II ORDERING OPTIONS

QRAE II Monitor Includes:

- Monitor as specified
- Sensors as specified
- Calibration adapter and internal filters (diffusion only)
- Quick reference guide
- User manual and ProRAE Studio II Software Package for Windows® XP, Windows® Vista and Windows® 7
- Alkaline adapter
- Water trap filter (pump only)
- Rechargeable versions additionally offer:
 - Charging/download cradle with computer interface cable
 - Universal adapter
 - Lithium-ion battery pack

Confined Space Entry Kit for Pump and Diffusion Models (CSK1) (CSK2)

- Hard transport case with pre-cut foam
- 6' (2 m) Tygon® tubing
- 10" (25cm) stiff aluminum sample probe with replaceable filter
- Constant-flow hand pump
- Tool Kit
- Three water trap filters
- CSK2 versions additionally offer:
 - Four-gas mix in a 34L cylinder (50% LEL, 18% O₂, 10 ppm H₂S, 50 ppm CO)
 - Calibration regulator and tubing